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09/660,888	09/13/2000	Tomisaburo Yamaguchi	A0-104 US	7288

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MOLEX INCORPORATED  
2222 WELLINGTON COURT  
LISLE, IL 60532

EXAMINER

FIGUEROA, FELIX O

ART UNIT PAPER NUMBER

2833

DATE MAILED: 11/05/2002

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 18

Application Number: 09/660,888  
Filing Date: September 13, 2000  
Appellant(s): YAMAGUCHI ET AL.

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GROUP 2800

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Dennis K. Scheer  
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 07/29/02.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: in issue A, "claims 1-14" should be --claims 1-11, 13, 14--.

**(7) *Grouping of Claims***

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because appellant has placed claims in more than one group. Since claims for appeal should be grouped based on patentability issues, i.e.

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whether the claims read over the prior art of record, the following grouping is suggested:  
claims 1-14 and 21; claims 17, 18 and 20; and claim 19.

**(8) Claims Appealed**

Claims 17, 19 and 21 include substantial errors as presented in the Appendix to the brief. Claims 17, 19 and 21 include limitations proposed in the After Final amendment filed 02/08/02, which was not entered, as noted on the Advisory Action mailed on 02/28/02. Accordingly, claims 17, 19 and 21 appear correctly written in the Appendix to the Examiner's Answer.

**(9) Prior Art of Record**

6,086,421	Wu et al.	7-2000
6,077,120	Futatsugi et al.	6-2000
6,095,869	Wang	8-2000
5,993,258	Matsunuma et al.	11-1999

US Copending Application 09/660,907, commonly assigned to Molex, Inc.

**(10) Grounds of Rejection**

The following grounds of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 13, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Wu et al. (US 6,086,421) in view of Futatsugi et al. (US 6,077,120) and Wang (US 6,095,869).

Wu discloses a connector housing (1) having a plurality of conductive terminals (2) having contact and tail portions, a body portion, a top wall portion (11) and a bottom wall portion (17) defining a space (10), the body portion, the top and bottom walls defining a U-shaped cross section, a metal shell member (3) having a front face panel (32) having an opening and a frame portion around the opening defining the front end of the connector, a top panel portion (34), a bottom panel portion (31) and two side panels (33) forming a receptacle cooperatively with the top and bottom wall portions on the housing. Wu does not disclose a retainer in the form of a metal shield. However, Futatsugi teaches a retainer in the form of a metal shield disposed partially over and retaining the retainer shield (see Fig.8), having a retention member (77) bent upon itself and extending downwardly into a top opening and having a free end to shield the housing and retain an opposite connector within the connector housing. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a retainer in the form of a metal shield having a retention member, as taught by Futatsugi, to shield the housing and retain an opposite connector within the connector housing. Wu also teaches the use of retention members (322) having free ends and extending sideways. It would have been obvious modification to one having ordinary skill in the art at the time the invention was made to use the retention member on different sides of the shell or the shield, since it has been held that rearranging parts

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of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

However, Wu does not show the connector housing not having any sidewall members. Wang discloses a connector housing (20) not having any sidewall members to reduce the manufacture cost. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a connector housing without side walls, as taught by Wang, to reduce the manufacture cost.

Regarding claims 4, 5 and 7, Wu shows bottom panel portion, top panel portion, and the side panels integrally formed with the front panel and being folded along side edges of the connector housing top wall portion.

Regarding claim 8, Wu discloses cooperating engagement means on the top panel and the side panel portions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the engagement means on the bottom panel, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Regarding claim 9, Wu discloses the claimed invention except for the location of the slot and the engagement tabs. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the location of the engagement means, since it have been held that a mere reversal of the essential parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

Regarding claim 10, Futatsugi discloses the shield and shell member made from single metal plates, in column 2 line 25.

Regarding claim 11, Wu includes a slot on the side portion separating the retention members.

Regarding claim 14, Futatsugi shows a portion of the shell (40) overlying a portion of the shield (70).

Claims 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Futatsugi et al. in view of Matsunuma et al. (US 5,993,258) and Wang.

Futatsugi discloses a connector (10) comprising an insulative housing (20) having an interior receptacle supporting a plurality of conductive terminals (30), a retainer shield (70) bent to overlie at least three sides of the housing and a retention member (77), and a retainer (40) in the form of a metal shield disposed partially over and retaining the retainer shield (see Fig.8). However Futatsugi does not disclose a plurality of retention members. Matsunuma teaches a plurality of retention members oriented in distinct vertical and horizontal planes to engage and retain a mating plug in orthogonal directions. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include more retention members, as taught by Matsunuma, to engage and retain a mating plug in orthogonal directions. However, Futatsugi does not show the connector housing not having any sidewall members. Wang discloses a connector housing (20) not having any sidewall members to reduce the manufacture cost. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a connector housing without side walls, as taught by Wang, to reduce the manufacture cost.

Regarding claims 20, Futatsugi shows an outer shell (40) partially retaining and overlying a portion of the shield (70).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Futatsugi et al., Matsunuma et al. and Wang as applied to claim 17 above, and further in view of Wu et al.

Futatsugi discloses an outer shell (40) having a front panel portion with an opening formed therein. However, Futatsugi discloses a shell overlying three surfaces of the connector housing. Wu teaches an outer shell (3) overlying at least four different surfaces of the connector housing to provide an extensive protection. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an outer shell (3) overlying more area as taught by Wu to provide an extensive protection.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11 and 13-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 09/660,907 in view of Futatsugi. It would have been an obvious modification to add the metal shield to provide more protection as taught by Futatsugi.

This is a provisional obviousness-type double patenting rejection.

**(11) Response to Argument**

In regard to the provisional double patenting rejection, since no arguments disagreeing with this rejection have been previously filed, the rejection remained. Additionally, it has been held that ...a disclaimer, like the affidavit referred to in 37 CFR 1.195, is an action taken to overcome a rejection, in this case for obviousness type double patenting. *In re Deters*, 185 USPQ644, 648, CCPA (1975). Therefore, in the appealed case, since appellant has not filed a terminal disclaimer to overcome the obviousness-type double patenting rejection, this rejection must be maintained.

In response to appellant's argument (on last paragraph on page 6 and 1<sup>st</sup> paragraph on page 8) that there is no suggestion in Wang to combine the references, specifically for the omission of side walls, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed.

Cir. 1992). In this case, one of ordinary skill in the art would have found a concern in reducing the cost of manufacture of any specific connector. It is also within the knowledge of one of ordinary skill in the art that removing the sidewalls of a connector housing having an outer shell would have resulted in a reduction of material usage and thus a reduction in the manufacturing cost. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form a connector housing without side walls, as taught by Wang, to reduce the manufacture cost. Additionally, the fact that Wang discloses additional structural advantages is irrelevant.

In regard to appellant's arguments (on page 8, 2<sup>nd</sup> paragraph) that none of the prior art relied upon "contain any disclosure or suggestion of providing a metal shield that overlies a portion of a connector housing and includes retention members for retaining a mating connector in the connector housing and an outer metal shell which retains the shield in its place upon the housing", please note that Futatsugi discloses a connector (10) comprising an insulative housing (20) having an interior receptacle supporting a plurality of conductive terminals (30), a retainer shield bent to overlie at least three sides of the housing and including a retention member (77), and a retainer (40) in the form of an outer metal shell disposed partially over and retaining the retainer shield (see Fig.8).

In regard to appellant's arguments (on last paragraph on page 8, ending on page 9) that "in Futatsugi et al. the forward shield member 40 is secured to the connector housing independently of the rear shield member 70, and rear shield member 70 is

secured to the connector housing independently of forward shield member 40", please note that please note that the retainer/outer metal shell (40) retains wall sections (82) of the shield member (70) from being pulled away of their original position. The fact that they are independently secure to the connector housing does not obviate the structural relationship between the two parts. Please note that the shield member (70) cannot be remove from the housing without the shell (40) being removed first, thus the shield member is prevented from being removed by the metal shell (40).

In regard to appellant's arguments (on pages 10-11) that it would not have been obvious to combine Futatsugi with Wu to provide a second metal shield member having a retention member projecting into a connector housing with a first shield member disposed partially over and retaining the second shield member on the housing because "no suggestion of a second metal shield member having a retention member projecting into a connector housing with a first shield member disposed partially over and retaining the second shield member on the housing can come from Wu et al. or Futatsugi et al.", please note that Futatsugi discloses a connector (10) comprising an insulative housing (20) having an interior receptacle supporting a plurality of conductive terminals (30), a retainer shield (70) bent to overlie at least three sides of the housing and including a retention member (77), and a retainer (40) in the form of an outer metal shell disposed partially over and retaining the retainer shield (see Fig.8).

In response to appellant's argument (on last paragraph on page 12) that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, i.e. "merely selecting bits and pieces from the prior art", it must be recognized that any

judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In regard to appellant's arguments (on page 13) that none of the prior art "contain any disclosure or suggestion of a retainer shield for shielding a portion of said connector housing, and an outer shell member extending partially over the retainer shield, the retainer shield being retained in its place upon the housing by the outer shell member", please note that Wu teaches a connector housing (1) and a metal shell member (3) and Futatsugi discloses a retainer shield (70) for shielding a portion of said connector housing, and an outer shell member (40) extending partially over the retainer shield, the retainer shield being retained in its place upon the housing by the outer shell member.

In response to appellant's arguments (on last paragraph on page 13) against the references individually, i.e. Wang and Matsunuma, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to appellant's arguments (on 1<sup>st</sup> full paragraph on page 14) that none of the prior art of record "contain any disclosure or suggestion of providing a connector housing having top and bottom wall portions with no side portions connecting the top

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and bottom portions, enabling retention members of a metal shield overlying the housing to extend at least partially into a space defined by the top and bottom housing portions", Please note that Wang discloses a connector housing (20) having top (21) and bottom (22) wall portions with no side portions connecting the top and bottom portions to reduce the manufacture cost, thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to form a connector housing without side walls, as taught by Wang, to reduce the manufacture cost. Also note that Futatsugi discloses enabling retention members (77) of a metal shield (70) overlying the housing (20) to extend at least partially into a space defined by the top and bottom housing portions (see Fig.6 for example).

In response to appellant's argument that there is no suggestion in Wang to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form a connector housing without side walls, as taught by Wang, to reduce the manufacture cost. It is noted that one of ordinary skill in the art would have found a concern in reducing the cost of manufacture of any specific connector. It is also within the knowledge of one of ordinary skill in the art that removing the sidewalls of a

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connector housing having an outer shell would have resulted in a reduction of material usage and thus a reduction in the manufacturing cost.

In response to appellant's arguments (on page 15) regarding claims 4-9 and 13, the concerns presented have been previously addressed above, in the discussion regarding claim 1.

In response to appellant's arguments (on page 16) regarding claim 18, specifically the number of retention members, please note that Matsunuma teaches a plurality of retention members oriented in distinct vertical and horizontal planes to engage and retain a mating plug in orthogonal directions.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Felix O. Figueroa  
October 28, 2002

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## ***Appendix***

17. A receptacle connector for providing electrical connection between an opposing plug connector with a circuit board, the opposing connector having an insertion end for mating with the receptacle of said connector, comprising:

an insulative housing, the connector housing supporting a plurality of conductive terminals, the connector housing having distinct top and bottom wall portions defining an interior receptacle in which said terminals are supported, the receptacle being sized to receive said plug connector insertion end when said plug connector is mated to said receptacle connector, the housing not having any sidewalls interconnecting the top and bottom wall portions together;

a retainer shield for shielding a portion of said connector housing and for engaging a plurality of exterior surfaces of said plug connector insertion end, the retainer shield including a body portion that is bent to overlie at least three distinct sides of said connector housing, said retainer shield further including at least two retention members formed therewith and projecting into said connector housing interior receptacle, said two retention members being oriented in distinct vertical and horizontal planes so as to exert a retaining force from two different directions on two different surfaces of said plug connector insertion end when inserted into said receptacle, and

a metal shell extending partially over the retainer shield, the retainer shield being retained in its place upon the housing by the metal shell.

19. (Amended) The connector of claim 17, further including an outer shell member disposed on the exterior of said connector housing, said shell member overlying at least four different surfaces of said connector housing and having a front panel portion with an opening formed therein that communicates with said connector housing interior receptacle.

21. A connector for providing a connection between an opposing connector and a circuit board, the opposing connector having an elongated insertion end for mating with the connector, said connector comprising:

an insulative housing supporting a plurality of conductive terminals, the connector housing having a body portion with distinct top and bottom wall portions extending therefrom, the connector housing top and bottom portions defining a receptacle therebetween adapted to receive said opposing connector insertion portion therein, said connector housing not having any sidewalls interconnecting said top and bottom wall portions and defining part of said receptacle;

a retainer shield that overlies a portion of said connector housing, the retainer shield being formed from metal blank and having three distinct retention members formed therewith, each of the retention members extending at least partially into said receptacle for engaging, an opposing portion of said opposing connector inserted into said receptacle, each of said retention members further extending into said receptacle from three different directions; and,

an outer metal shell having a plurality of different panel portions disposed on some portions of said connector housing in overlying relationship, the shell member having a front face panel that extends vertically between said connector housing top and bottom wall portions, two side panels that extend vertically between said connector top and bottom wall portions, the front face panel having an opening formed therein that communicates with said receptacle, two of said retention members being disposed interiorly of said outer shell side panels and the third of said retention members being disposed interiorly of said outer shell and said connector housing top wall portion.